



COUNTY OF SAN DIEGO
Great Government Through the General Management System – Quality, Timeliness, Value
DEPARTMENT OF HUMAN RESOURCES

CLASS SPECIFICATION

CLASSIFIED

TOXICOLOGIST I	Class No. 004307
TOXICOLOGIST II	Class No. 004305
TOXICOLOGIST III	Class No. 004306

■ CLASSIFICATION PURPOSE

To perform complex chemical and toxicological examinations and analysis of biological specimens, to determine the presence and identity of toxicological, alcoholic, or pharmaceutical substances, in order to determine causes of death; and performs related work.

■ DISTINGUISHING CHARACTERISTICS

Toxicologists are professional laboratory scientists responsible for conducting chemical and toxicological analysis as part of the investigation to determine the cause of death. Toxicologist classes are allocated only to the Medical Examiner's Office. This class differs from the Criminalist class series in that Criminalists perform a wide variety of forensic analyses on physical evidence that is used in law enforcement investigations.

Toxicologist I:

This is the entry-level class in the Toxicologist series. Incumbents work under immediate supervision and are expected to perform examination and analytical work in a progressively more independent manner.

Toxicologist II:

This is the journey-level class in the Toxicologist series. Incumbents work independently, under general supervision, and perform the more complex examinations, analyses, and method development. This class differs from the next higher class, Toxicologist III, in that the latter works in a lead capacity, evaluates methodologies, and reviews and updates laboratory procedures.

Toxicologist III:

This is the lead-level class in the Toxicologist series. Under general direction, incumbents serve as lead workers providing technical guidance and training to subordinate toxicologists and conduct the most complex examinations. This class differs from the next higher class, Forensic Toxicology Laboratory Manager, in that the latter is a first line supervisor responsible for the Toxicology Section of the Medical Examiner's Office and the overall supervision and evaluation of all toxicologists.

■ FUNCTIONS

The examples of functions listed in the class specification(s) are representative but not necessarily exhaustive or descriptive of any one position in the class(es). Management is not precluded from assigning other related functions not listed herein if such duties are a logical assignment for the position.

Toxicologist I and II

Essential Functions:

1. Conducts both routine and complex chemical examinations of tissues and body fluids to determine the presence and amount of toxic substances, in order to aid in establishing the cause and manner of death.
2. Conducts chemical examinations on both biological and non-biological samples in order to establish the use and misuse of dangerous drugs.
3. Conducts examinations involving research and development of toxicological techniques to be employed in the examination and analysis of common or unusual specimens.
4. Determines the presence and identity of poisons and drugs.
5. Prepares reports on findings, including analytical calculations, and maintains an accurate and precise record of all work performed.

6. Uses analytical balances, pH meters and other routine laboratory apparatus and specialized equipment such as thin-layer chromatography, high-pressure liquid chromatography, gas chromatography, spectrophotometer, immunoassay, and mass spectrometry.
7. Provides responsive, high quality service to County employees, representatives of outside agencies and members of the public by providing accurate, complete and up-to-date information, in a courteous, efficient and timely manner.

Non-Essential Functions:

1. May testify in court as an expert witness in civil or criminal cases as to theory, technique and results of examinations performed.

Toxicologist III

Essential Functions:

All the duties listed above and

1. Acts as a lead worker providing technical guidance and training to subordinate toxicologists.
2. Assists the Forensic Toxicology Laboratory Manager in scheduling laboratory personnel.
3. Handles the most complex examinations and analyses.
4. Evaluates and develops methodologies as applicable for conducting analysis involving drugs, poisons, and other toxic substances where standards and established techniques are not available.
5. Reviews and updates laboratory procedures at the direction of the Forensic Toxicology Laboratory Manager.

■ KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

The following apply to all classes:

- Laboratory procedures and techniques for analysis of biological and non-biological samples.
- Maintenance, operation, and use of equipment and instrumentation used in analytical lab examinations and tests relative to forensic toxicological examinations.
- County customer service objectives and strategies.

Toxicologist II and II (in addition to the above):

- Quantitative and qualitative analysis of biological extracts, tissues, and body fluids.
- Analytical toxicology.
- Body distribution, toxicity, and metabolism of drugs.
- Rules of evidence and general procedures of criminal and civil courts relative to testimony as an expert witness.

Skills and Abilities to:

The following apply to all classes:

- Maintain records and prepare definitive reports on laboratory findings.
- Analyze and interpret results from tests.
- Interpret and effectively carry out complex written and oral instructions.
- Maintain scientific records and reports on laboratory findings.
- Make mathematical calculations, peculiar to physics and chemistry, relevant to analytical laboratory studies.
- Communicate effectively with technical expertise on both lay and technical levels.
- Communicate effectively orally and in writing.
- Present technical testimony in court.
- Establish effective working relationships with management, employees, employee representatives and the public representing diverse cultures and backgrounds.
- Treat County employees, representatives of outside agencies and members of the public with courtesy and respect.
- Assess the customer's immediate needs and ensure customer's receipt of needed services through personal service or referral.
- Exercise appropriate judgment in answering questions and releasing information; analyze and project consequences of decisions and/or recommendations.

■ EDUCATION/EXPERIENCE

Education, training, and/or experience that demonstrate possession of the knowledge, skills and abilities listed above. Examples of qualifying education/experience are:

Toxicologist I:

A bachelor's degree from an accredited college or university in chemistry, biochemistry, a physical or life science, or a closely related field. Course work must have included eight (8) semester/ twelve (12) quarter units of general chemistry AND three (3) semester/ four and a half (4.5) quarter units of quantitative analysis.

Toxicologist II:

1. One (1) year of full-time experience as a Toxicologist I in the County of San Diego; OR
2. A bachelor's degree in chemistry, biochemistry, a physical or life science, or a closely related field, AND, two (2) years professional, full-time experience performing forensic toxicology, examinations, or biological laboratory examinations. Course work must have included eight (8) semester/ twelve (12) quarter units of general chemistry AND three (3) semester/ four and a half (4.5) quarter units of quantitative analysis.

Note: additional full-time, graduate-level college coursework in analytical chemistry, biochemistry, or related subject may substitute for required professional experience on a year-for-year basis.

Toxicologist III:

1. Two (2) years of full-time experience as a Toxicologist II in the County of San Diego; OR
2. A bachelor's degree in chemistry, biochemistry, a physical or life science, or a closely related field, AND, three (3) years of professional, full-time experience performing toxicological examinations, two (2) years of which must be at the level of Toxicologist II as defined above. Course work must have included eight (8) semester/ twelve (12) quarter units of general chemistry AND three (3) semester/ four and a half (4.5) quarter units of quantitative analysis.

Note: additional full-time, graduate-level college coursework in analytical chemistry, biochemistry, or related subject may substitute for the required professional experience on a year-for-year basis.

■ ESSENTIAL PHYSICAL CHARACTERISTICS

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the classification(s). Reasonable accommodation may be made to enable an individual with qualified disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: sitting and repetitive use of hands. Occasional: walking, standing, bending and twisting of neck, bending and twisting of waist, squatting, simple grasping, reaching above and below shoulder level, and lifting and carrying of files weighing up to 10 pounds.

■ SPECIAL NOTES, LICENSES, OR REQUIREMENTS

License

A valid California class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in this class may be required to use their own vehicle.

Certification/Registration

Toxicologist I:

Must meet California qualifications as a Forensic Alcohol Analyst at the time of appointment and obtain certification prior to the end of one (1) year probationary period.

Toxicologist II, III:

Certification as California Forensic Alcohol Analyst or California Forensic Alcohol Analyst Trainee is required at time of appointment.

Working Conditions

Office environment; exposure to computer screens. May be exposed to fumes and bad odor.

Background Investigation

Must have a reputation for honesty and trustworthiness. Felony convictions will be disqualifying. Misdemeanor convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a thorough background investigation which may include a psychological, polygraph or other examination or test.

Probationary Period

Incumbents appointed to permanent positions in this class shall serve a probationary period of 12 months (Civil Service Rule 4.2.5).

New: 004307 October 23, 1998
Retitled: 004305/ 004306 October 23, 1998
Revised: August 4, 2003

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Union Code: PR	Variable Entry: Y
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